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Newsletter

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DECEMBER 1980

STATE FIRE MARSHAL REPORTS

The following report will touch on some of the Fire Marshal Bureau programs for the past year and what we have been doing with those programs -- please keep in mind that almost all of our Bureau activity is working with local fire jurisdictions.

Arson Programs: We now have 22 arson investigation teams organized in Montana. These teams are made up of fire and law enforcement personnel and county attorneys, and the Bureau provides training to these teams at various intervals throughout the year.

The Bureau conducted 5,452 man-hours of training in arson investigation this past year. This includes the arson seminars we provide for the Montana Law Enforcement Academy. Incidentally, this seminar will be increased from one week to two weeks in 1981. Also, in the past, this seminar has been limited to law enforcement; however, firefighters who are members of arson investigation teams are now eligible to attend. Your application must be signed by your local law enforcement authority or by the State Fire Marshal.

Our six Deputy State Fire Marshals have all completed the three-week arson investigation course at the U.S. Fire Academy in Emmitsburg, Maryland. Also, four deputies have attended the Montana Law Enforcement Academy this year -- our newest deputy completed the Basic Law Enforcement Course, two completed the Intermediate Course, and one completed a special course for forensic hypnosis.

The Fire Services Training School has conducted several arson detection classes this year, so, all in all, there has been a great deal of emphasis placed on arson investigation training in the State.

Factory Built Chimneys: A fire problem that is becoming evident in Montana is that approved metal chimneys, such as metalbestes and triplewall, commonly used in woodstove installations, will deteriorate on the inside. Because the exterior of the chimney appears to be satisfactory, a burned out interior lining may not be detected until a fire results. The life of a listed metal chimney is approximately 20 years; however, reports from various areas of the country indicate that the life of these chimneys may be less than 10 years when used with woodburning stoves.

To assist the Fire Marshal Bureau in documenting this problem, please take pictures of any chimneys where you find a breakdown of the interior as described, and send the pictures to the Fire Marshal at 1409 Helena Avenue, Helena, MT 59620. If you cannot take pictures of the problem, please keep the chimney section and notify the Deputy State Fire Marshal in your district, and he will take pictures of the chimney. It is important that we document this problem as soon as possible, so that we may implement changes to correct the problem.

Statutes and Codes for Fire and Life Safety: Following the adoption of the 1979

edition of the Uniform Building Code by the State Building Codes Division, we adopted the 1979 edition of the Uniform Fire Code with most appendices so as to remain compatible in code enforcement with the Building Codes Division. I get several calls a year from chiefs from unincorporated municipalities and fire districts asking how the fire codes apply to them, and how they can use the codes. The following statutes are from Title 50, Chapter 61 - Fire Safety in Public Buildings - and explain how they affect you as chief:

50-61-101, M.C.A., states "the purpose and intent of this chapter is to provide for the public safety in case of fire in those occupancies specified in 50-61-103; to provide for fire escapes, fire fighting apparatus, fire alarms; and to provide for inspection of such buildings and premises by specified officers."

50-61-102, M.C.A., states "the state fire marshal has general charge and supervision of the enforcement of this chapter, and the officers enumerated in 50-61-114 shall act under his general charge and supervision, shall assist him in giving effect to this chapter, and are subject to his direction and rules adopted for the enforcement of this chapter."

50-61-114, M.C.A., states "the chief of the fire department of each municipality or district where a fire department is established and the county sheriff or deputy fire marshals where no fire department exists shall enter all buildings and upon all premises within their jurisdiction at least once each 6 months for the purpose of examining the premises for violations of this chapter. The inspection shall include but is not limited to testing fire alarms and fire extinguishers, examining fire hose, attachments, and other fire apparatus, and examining fire escapes. Copies of the inspection shall be filed in the office of the state fire marshal on forms to be provided by him."

The rule adopted by the Fire Marshal for enforcement of this chapter is the 1979 edition of the Uniform Fire Code. These three statutes then bring you as fire chiefs or fire districts or unincorporated municipalities under the umbrella of the Fire Marshal's authority for requiring a reasonable degree of fire and life safety in public buildings in your jurisdictions. I would caution, though, that if you are not familiar with codes, or the authority you may or may not have under the administrative sections, then I suggest that you contact our office for assistance if you have a problem. As an example, this past year, we have assisted several communities in having old buildings either removed or closed up. We have also assisted in matters such as above ground storage tanks and so on.

Fire Reporting System: Over 13,000 fire incidents were reported to the Bureau last year. These reports were the basis for our Annual Report, which was distributed in September. The majority of the problems that involved the reporting system last year have now been resolved, and all reports received by the Bureau, to date, are being entered into the computer. Fire departments in Montana should be receiving printouts relating to their departments on a routine basis beginning in January 1981.

The State Fire Marshal Bureau received a Quality Control Grant for the Montana Fire Incident Reporting System (MFIRS). The objective of this grant is to improve the quality of the fire incident and casualty data that is being collected in Montana. This quality control data will make it easier to identify fire problems both state-wide and in specific fire districts. In accordance with the grant, the Bureau selected sixty departments around the State to participate in quality control. All fire incident reports (902 G and 902 F) that are received from these departments will be reviewed for reporting errors or reporting problems. These errors and/or problems will be brought to the department's attention, and the Bureau will offer assistance to ensure quality control. The Bureau has held 12 meetings around the state, and will be monitoring reports and departments regularly.

Hazardous Materials: The U.S. Department of Transportation has approved and issued the final regulations governing a numbering and placarding system for the identification of hazardous materials. The system is an identification system based on a system adopted for worldwide use by the United Nation Committee. An emergency response guidebook will be distributed to the 400,000 police and fire stations in this country. The State of Montana now has a 24-hour telephone number that will put callers in contact with the proper authorities if you have a situation involving hazardous materials. This number is (406) 449-3034.

Fire Equipment: The State Fire Marshal Bureau has rewritten the rule regulating the sale, service, or installation of portable fire extinguishers, fire extinguishing systems, fire alarms and fire alarm systems. There are approximately 400 individuals and companies licensed and certified by our office. The hearing on the proposed rule change will be held sometime after the Legislative Session.

Uniform Fire Code, 1979 Edition -- Adoption: In the April 1980 Fire Marshal Newsletter, we announced that the State Fire Marshal Bureau adopted the 1979 edition of the Uniform Fire Code, together with Appendix Chapters A,B,C,D,E,G, and H, and two paragraphs were deleted from Section 10.301(c). We failed to mention that for the purpose of this regulation, the following provisions shall apply:

(a) As used in the Uniform Fire Code, the terms chief, fire chief, fire marshal, and fire prevention engineer shall mean the head of the State Fire Marshal Bureau, Department of Justice.

(b) As used in the Uniform Fire Code, the terms fire department and bureau of fire prevention shall mean the State Fire Marshal Bureau.

(c) As used in the Uniform Fire Code, the term building official shall mean the head of the Montana State Building Codes Division, Department of Administration.

(d) As used in the Uniform Fire Code, the term city shall mean the State of Montana.

No provision of the Uniform Fire Code shall be construed contrary to the provisions of Chapter 3, Title 50, M.C.A., and in all cases where conflict arises between the Uniform Fire Code and Chapter 3, Title 50, M.C.A., the latter shall prevail.

All sections of the Uniform Fire Code pertaining to permits and certificates shall be considered void and are not adopted as part of these regulations.

DEATH DOWN, INJURIES UP FROM FIRE IN '79 (News About Fire #50-80-0911)

There were fewer deaths from fire in 1979 than in 1978, but injuries increased. So reports the National Fire Protection Association (NFPA) in its annual survey of fire loss in the United States.

Writing in Fire Journal, Michael J. Karter, Jr., Senior NFPA Statistician reports that 7,780 civilians died in an estimated 2,845,500 fires to which the public fire service responded -- a 4.3 percent decrease. On the other hand, 31,325 civilians (persons who are not fire fighters on duty), were injured, an increase of 5.1 percent over 1978.

Property damage from fire showed a dramatic increase over last year. There was an estimated \$5.75 billion in property damage, a 27.8 percent increase. Although not adjusted for inflation, the increase is still well above the prevailing rate of inflation. The rise is attributable, in part, to a dramatic increase in "large loss fires." Losses from these fires, defined as causing more than \$500,000 damage, increased 40.3 percent in 1979 over 1978.

Of the 7,780 fatalities in fires in 1979, 5,765 (74.1 percent of the total) died in residential fires. This figure remains consistently high year after year, according to NFPA.

Fire of suspicious or incendiary origin has been an NFPA concern for many years. While 1979 saw a 7.1 percent decrease in the number of such fires in structures, the dollar losses increased 24.5 percent from 1978 to \$1.328 billion. Arson accounted for 14.3 percent of all structure fires and 26.8 percent of all property loss from structure fires.

Also, NFPA estimates there were 63,500 incendiary or suspicious vehicle fires an increase of 32.3 percent from 1978. Resulting damage totaled \$167 million.

The fire loss survey is conducted annually to provide information and identify trends that NFPA and others use to develop codes and standards, fire protection planning, as well as fire safety education programs. The data for the survey figures were gathered from 2,800 fire departments protecting 82 million people, or 37 percent of the U.S. population.

The bi-monthly Fire Journal is the primary information reference to the 32,000 members of NFPA, an independent, non-profit advocate of fire safety.

RECORD-BREAKING LOSSES FROM LARGE-LOSS FIRES IN '79 (News About Fire #56-80-1015)

For the first time, yearly property loss from "large loss" fires in the United States exceeded the billion dollar mark, reported the National Fire Protection Association. In this annual study, fires are classified "large loss" when damage of more than \$500,000 in direct dollar loss results. In 1979, \$1.01 billion was lost in 619 such fires.

This is a 40.3 percent increase in dollar loss compared with 1978, from a corresponding increase in the number of large loss fires of 30.3 percent. The average loss per large loss fire also increased in 1979 to \$1.64 million from \$1.52 million in 1978.

The findings are published in the September issue of Fire Journal, the membership publication of NFPA, an independent, non-profit fire safety advocate with 32,000 members nationwide.

These large loss fires are significant because they contribute disproportionately to total dollars lost against the total number of fires that occurred in a given year. In 1979, large loss fires were 0.02 percent all fires in the U.S. and yet accounted for 17.6 percent of the total dollar loss (estimated at \$5.75 billion for 1979).

The two largest loss fires occurred in crude oil tank ships hit by lightning while berthed at refinery unloading facilities. Combined losses for these two incidents alone totaled more than \$100 million.

The number of \$3 million or more fires increased dramatically to 61 fires reported in 1979 from 36 in 1978. There were 11 fires that resulted in losses of \$10 million or more each, for a total loss of \$243 million, accounting for 24.0 percent of the total large fire loss reported.

"Inflation certainly influenced the dollar value lost," said Donald Redding, author of the study, "but a greater influence was the 69.4 percent increase in the

number of fires costing \$3 million or more. We are also fairly certain that inflation is a factor in the increase in the number of large loss fires this year."

Traditionally, three of the nine Property-Use Divisions used in the study -- stores and offices, manufacturing plants and storage facilities -- dominate losses both in terms of frequency of large-loss fires and dollar value lost. However, in 1979, the Special Properties Division, which includes water transport vessels and off-shore drilling rigs, led all other major Property-Use Divisions in dollar loss: \$231.3 million, with an average dollar loss of \$4.2 million per fire.

Fires of suspicious or incendiary origin accounted for 22.0 percent of large loss fires in 1979, compared with 17.8 percent in 1978. Total dollars lost from such fires was 19.1 percent of the total, against 24.1 percent in 1978.

KEEP THE HO (HO HO) IN THE HOLIDAY SEASON (Reprinted from the International Fire Service Training Association, Fall 1980)

Fire losses during the holiday season are especially heartrending. Most of the residential fires that occur during the holidays are preventable, and each fire department has the duty to remind residents of the special hazards of this time of year and to help them have a happy, fire safe holiday season. The following hints from the Underwriters Laboratories may be used in seasonal public fire education programs.

Lights: Christmas tree lights and other decorations set the theme for the Christmas holidays. Here are some very important points to remember when using them:

- Use only lights that have been tested for safety. Identify these by the UL Label from Underwriters Laboratories.
- Check each set of lights for broken or cracked sockets, frayed, or bare wires, loose connections. Discard any of this equipment that you deem unsafe.
- Check labels of lights to be used outdoors to see that they are suitable for outdoor use. Never use indoor lights outside. Fasten outdoor lights securely to trees, walls, or other firm support to protect them from wind damage.
- Use no more than three sets of lights per single extension. Read manufacturer's instructions carefully and do not use more than the recommended number of lights in one circuit.
- Always turn off lights on trees and other decorations when you retire or leave your home. A short circuit in any of this equipment could cause a fire.
- Never use electric lights on a metallic tree. Damaged insulation in lighting on a metallic tree could cause the entire tree to be charged with electricity. To avoid this danger, use colored spot-lights above or beside a metal tree, never fastened onto it.
- Keep children away from light sets and electrical decorations. All lights present the problem of shock and casualty hazards for curious kids.

Paper: The opening of Christmas presents is always a special time during the holidays. Take special precautions when disposing of the wrappings.

- Always dispose of wrappings immediately after opening.
- Place trash in a metal container. DON'T burn wrappings in the fireplace, they may ignite suddenly, and cause a flash fire.

Trees: Artificial trees (plastic) should bear the UL Label. Some unlabeled plastic trees burn with extreme vigor.

Do not rely on chemical coatings or sprays to make your live evergreen flame-resistant. Follow the safety rules below when shopping for a natural tree. A fresh tree will stay green longer and be less of a fire hazard than a dry tree. To check for freshness, remember:

- Check for color and scent. A fresh tree is deep green in color and has a strong scent of pine.
- Be sure that the needles do not readily fall from the tree.
- The trunk butt of a fresh tree should be sticky with sap.

Place your Christmas tree in a location away from fireplaces, radiators, or other heat sources. Be sure that it is out of the traffic pattern and does not block doorways.

Cut off about 2-inches of the trunk. Mount tree in a sturdy water-holding stand with wide-spread legs. Be sure that the tree is stable.

Fill base holder with water. Keep it full of water while the tree is indoors (as you would fresh flowers). Remember, heated rooms dry trees out rapidly; and a dry tree is a fire hazard.

Fires: Your fireplace is a source of warmth and heat. Before starting your fire, be sure to remove all paper decorations and boughs from the immediate area. BE SURE THE FLUE IS OPEN. NEVER set up your Christmas tree near the fireplace, this is a potential fire hazard.

Use a screen to enclose the front of your fireplace to confine live embers and sparks to the fire box.

Candles: Never use lighted candles on a tree or near other evergreens.

- Always use non-flammable holders.
- Keep away from other decorations, wrapping paper.
- Place candles where they cannot be knocked down or blown over.

CHRISTMAS TREES (Reprinted from December 1979 Fire Marshal Newsletter)

The State Fire Marshal Bureau does not advocate the use of water chemicals such as borax-and-boric-acid for flame retardants for use on Christmas trees. With

Christmas just around the corner, the following article from Chapter 5, Section 10, of the Fire Prevention Handbook, might be of interest.

To achieve a satisfactory degree of flame resistance in any combustible material, it is essential to get a certain minimum quantity of effective flame retardant chemical either into or on the surface of the material to be treated. Since Christmas trees by their nature are not absorbent, the only effective method of treatment is by application of a surface coating. Efforts to treat Christmas trees with simple solutions of water-dissolved chemicals, such as borax-and-boric-acid diammonium phosphate, or ammonium sulfate are completely and emphatically useless. Solutions such as these can be effective flame retardant agents for cotton or rayon fabrics, paper, dry grass, and similar cellulose-based materials which will absorb water containing the dissolved chemical. However, Christmas trees will not absorb such solutions, therefore, the only chemical which can be retained by the tree is that which dries on the surface. This positively cannot be enough to have any significant flame retardant value unless the solution is thick or syrupy enough to form a fairly heavy coating. The chemicals noted above cannot be made to form such a thick solution except by means of special ingredients and manufacturing methods not available to the amateur. Publications which recommend the use of the above chemicals mixed with water for the flameproofing of Christmas trees are in error, regardless of the source.

Much misunderstanding in this area results from tests of fresh trees treated with simple water-thin solutions of the type described above. Such tests lead to the erroneous conclusion that the treatment is effective, when, as a matter of simple fact, the tree was naturally flame resistant due to its water content. Tests of the same treated tree after thorough drying would quickly reveal the total ineffectiveness of the so-called treatment. From the inspection standpoint, tests on a treated fresh tree are meaningless. Proper evaluation requires that a sample be taken and dried adequately before test, even though this may seem to be a cumbersome procedure.

The State Fire Marshal Bureau approves certain flame retardant chemicals, which include several products intended for treating Christmas trees. These are all of the coating type.

GASOHOL EXPERIMENTS CONDUCTED BY FIRE SERVICE EXTENSION (from Iowa Fire Service Information, April 1980)

On November 20, 1979, Fire Service Extension, Iowa State University, Ames, Iowa, in cooperation with ADM Corn Sweeteners of Cedar Rapids, Iowa, and Iowa Fire Equipment of Des Moines, Iowa, conducted field research using alcohol and gasohol under fire conditions at the Demonstration and Research Area. The type of alcohol employed for the fire tests was C.D.A. 19, the chemically denatured ethyl alcohol currently used in practically all of the gasohol in the United States. The gasohol was composed of 10 percent C.D.A. 19 and 90 percent unleaded gasoline. This is presently a standard formula for commercial sales at service stations throughout the country. Several extinguishing agents were used at differing rates of discharge on various sizes of flammable liquid fires. The day was overcast, with light mist and rain showers. Temperatures were in the mid- to upper-30s, with a light wind blowing.

The first experiments were conducted in metal pans, 48 inches by 44 inches by 12 inches, using 5 gallons of alcohol, formula C.D.A. 19, containing 5 percent denaturants. The flame was light orange in color. Using a 15-second preburn to prevent excess heating of the container, a 20-pound 40-BC dry chemical extinguisher was

applied for 5 seconds by a fire fighter to obtain extinguishment. The remaining fuel was reignited, with various individuals using the same extinguishing agent with similar results, even after heating of the container. The only difference noted was that the vaporization of fuel on subsequent fires resulted in a flash upon approach of the ignition source.

Pure alcohol burns with a pale blue flame, and since the C.D.A. 19 grade of alcohol burned with an orange flame, it was speculated that the denaturing agents contributed the orange color. A small amount was placed on the ground and ignited. The flame color was orange until it burnt itself out, which indicated (1) the denaturants do not separate themselves by absorption into the soil and (2) the denaturants do not burn out more or less quickly than the alcohol.

The next experiment used 5 gallons of alcohol in the same size containers with a 15-second preburn before application of a 2½-gallon portable "Light Water" 20-B rated extinguisher. Two gallons were applied to obtain coverage of the alcohol in 51 seconds. Flame was detected near the hot pan walls, resulting in a deterioration of the light water blanket and reignition at 2 minutes, 20 seconds from initial ignition. Several applications were made by individuals using light water with similar results.

The next fire in the same size containers consisted of 5 gallons of water mixed with 5 gallons of alcohol. A 20-pound 40-BC extinguisher, applied after a 15-second preburn, required 2 seconds for extinguishment. The same results were obtained by several individuals using a 40-BC extinguisher.

The next experiment was performed in the same pans, using 5 gallons of water and 5 gallons of alcohol as fuel. After a 15-second preburn, water was applied through a 1½-inch line with a 30-gpm nozzle, 30-60° fog at 100 psi. At the end of 7 minutes, 26 seconds, the fire ceased and could not be reignited with an ignition stick. This showed that the fuel had been diluted to the point where it would not reignite, or the fuel had been completely consumed.

The last series of experiments in the 48-inch by 44-inch pans consisted of 5 gallons of standard gasohol. A 15-second preburn required a 7-second application of the 30-pound 80-BC dry chemical extinguisher by the first operator. The second operator, after reignition of the remaining fuel, took 5 seconds and the third operator required only 3 seconds.

5-Foot by 8-Foot Containers. The next series of tests were in 5-foot by 8-foot containers. Fifteen (15) gallons of alcohol were allowed a 15-second preburn. The fire was extinguished with a 4-second application of a 20-pound 40-BC dry chemical extinguisher. The same time was required by several operators in subsequent fires using a 30-pound 80-BC extinguisher.

The next fire was in the 5-foot by 8-foot pan with 15 gallons of alcohol. A 60-gpm nozzle of water was applied until the fuel burned out.

Then, 15 gallons of gasohol in the 5-foot by 8-foot pan were allowed a 15-second preburn and extinguished with the dry chemical extinguishers. Several operators extinguished the gasohol in an average time of 10 seconds.

The next experiment of gasohol in the 5-foot by 8-foot pans was with a 20-B "Light Water" portable extinguisher. This method was ineffective and the gasohol burned itself out.

55-Gallon Alcohol Spill. The next series of experiments consisted of 55 gallons of alcohol spilled on the ground, resulting in a spill fire of approximately 100 square feet. The equipment used for extinguishment was a 1½-hose line with a 75-gpm constant gallonage fog nozzle at 100 psi and an in-line eductor set at 6 percent for all special foam agent tests. The first extinguishing agent used was 3M Light Water A.T.C. 6-9 percent concentrate. Following a 30-second preburn, control was obtained after 24 seconds of application.

The next spill of 55 gallons of alcohol was extinguished in 30 seconds using the same hardware applying National Foam's Aer-O-Water P.S.I. 3,6, or 10 percent Polymeric/Aqueous Film Forming Foam Liquid. This material was designed for use on polar solvents.

It should be noted that an equal volume of agent, approximately 4 gallons, was used in each of the above experiments, and reignition was not possible. Both agents seemed to be equally effective.

Simulated Bulk Plant Spill. The final experiment was a simulated bulk plant spill fire using 700 gallons of gasohol. Time was not measured for this exercise because the objective was to observe the agent reaction in and around the various tanks, valves, and other obstructions within the spill area. A simulated leak from a 1½-inch pipe was flowing gasohol during application of the agent until the supply terminated, which was approximately 200 additional gallons, about 3 minutes into the application phase of the agent. A 95-gpm fog nozzle was used with the in-line eductor and 3M "Light Water." Back-up lines were charged and manned for use if necessary but were not turned on during the exercise. The evaluation by observers of this gasohol fire noted no observable difference in extinguishment of gasohol from the many, many previous exercises in the same area using gasoline.

Summary. Dry chemical hand extinguishers, foams, and water react the same on gasohol in field usage as they do with gasoline. When encountering a pure alcohol fire, it should be noted that it will break down light water and possibly some of the other foams normally found in the fire station.

THE USE OF FLAME IN THE DEVELOPMENT OF LATENT PRINTS (from New Jersey Newsletter
by: Major Joseph J. Corr, Jr., CO, April, 1980 - Vol. VII, #2)
USAREUR Crime Laboratory

"During the past three years Master Specialist Oscar H. Baker, Chief, Fingerprint Section, USAREUR Military Police Crime Laboratory, Frankfurt, Germany, has conducted extensive experiments to determine a simple but effective method for the development of those latent fingerprints which due to age or the type of surface on which they appear, do not respond adequately to the ordinary brush and powder technique.

Based on these experiments, the method adopted by this laboratory is referred to as the "flame process," so called because the developing medium is the soot produced by igniting certain materials. Camphor is the recommended developing agent due to its ready availability, its ease of ignition, complete combustion, and its jet black and fine-grained soot which adheres easily and firmly to latent impressions. The only other material required is a fine fingerprint brush composed of ostrich or maribou feathers.

The flame technique is both simple and effective. A spoonful of camphor crystals is placed in an earthenware or pyrex container and ignited. A lighter should be used since a match or burning paper will destroy the uniform fineness of the camphor soot. The object suspected of containing latent fingerprints is passed quickly several times through the apex of the flame until thoroughly coated. The soot is then removed with an ostrich or maribou feather duster. Any latent fingerprints become clearly visible. The impressions can be further clarified by washing the surface in a gentle current of cold water. This procedure removes those soot particles which lodge between the fingerprint ridges and in the depressed areas of rough surfaces. The developed impression can be lifted in the usual manner. Frequently, an excellent second lift is possible from the same latent.

The principle of this technique is that the flame process applies both heat and pigmentation simultaneously. The heat softens the dried ridge impressions and makes them receptive to the fine grain soot. The impression then gives evidence of having been baked on the object and thus has the ability to withstand gentle washing.

In the absence of camphor, adequate black soot may be produced by igniting pine chips or rosin. However, rosin is more difficult to ignite than either camphor or pine. If white soot is desired, it may be obtained by igniting strips of magnesium. The object containing the fingerprints is then processed in the same manner as with black soot. Care must be exercised in handling magnesium because of its high combustibility.

An interesting and unusual application of the flame process occurred in a recent case in which this laboratory was involved. A rough-faced padlock, painted grey, had been forced from a door and illegal entry effected. Some 8 to 10 hours later when the crime was discovered, the lock was inadvertently handled by a person who did not appreciate its value as evidence. Consequently, when the lock was examined at the laboratory it was discovered that one print was superimposed on the other. On the theory that the underimpression had had time to harden before the overimpression was placed on the lock, warmed rubber lifting tape was applied to the lock to remove all powder present and all traces of the overimposed print. The lock was then subjected to camphor flame and upon removing the surplus soot, another latent impression was identified when compared with record impressions.

In certain instances, it appears that the flame process is far superior to the ordinary brush and powder methods as oftentimes latent images were developed on surfaces where ordinary powder will not satisfactorily adhere, such as unpainted tin. However, the flame process is ineffective on greasy surfaces.

It is not known to what extent the flame process has been utilized by other agencies. The technique described and the results obtained are based upon its use at the USAREUR Military Police Crime Laboratory, Frankfurt, Germany."

NIOSH ORDERS "STOP SALE" OF BIOMARINE SCBA (Washington Scene, Vol. 3, No. 21)

The National Institute for Occupational Safety and Health (NIOSH) has issued a "stop sale and/or distribution" notice affecting Biomarine self-contained breathing apparatus.

The action notifies BioMarine Industries to stop sale and/or distribution immediately of models 30P, approval number TC-13F-84, and 60P, approval number TC-13F-85,

and to recall all such units in the field.

The notice was issued by NIOSH after tests, on units containing non-approved modifications to the breathing bag springs, revealed exhalation resistance beyond the allowable limit.

Further information on the "stop sale" notice is available from William I. Cook, Acting Chief, Testing and Certification Branch, Division of Safety Research, Chestnut Ridge Road, Morgantown, West Virginia 26505, (304) 599-7336.

NBS DOCUMENTS FIRE FIGHTER HEALTH HAZARDS (Washington Scene, Vol. 3, No. 21)

Laboratory studies at the National Bureau of Standards (NBS) have added weight to the argument that fire fighters should be cautious about removing their breathing apparatus too soon after a fire has been put out. Tests performed in the Bureau's Center for Fire Research show that phosgene gas is generated when polyvinyl chloride (PVC), a common plastic material used in electrical wiring insulation, is subjected to electrical arcing.

Separate research at NBS also identified a hazard tied to urea formaldehyde foam, a material which has been used recently as thermal insulation in walls of new and existing homes.

In experiments that simulated real fire conditions, electrical wires with PVC insulation were overloaded electrically and, separately, burned in a small furnace. Only trace quantities of phosgene were generated in these tests, seemingly putting to rest rumors that phosgene is released in significant quantities when PVC is burned.

However, NBS scientists did find that electrical arcing between wires coated with PVC produced substantial quantities of phosgene. This could present special problems for fire fighters in commercial buildings where areas containing such electrical equipment as transformer vaults or control panels could be involved in a fire in which electrical arcing might take place. Phosgene may pose a toxicological hazard during the arcing period and for some time thereafter. Moreover, hydrogen chloride from the combustion lingers even longer, presenting a special danger to fire fighters during the clean-up phase of a fire when they often remove breathing apparatus.

In other tests, NBS chemists also concluded that urea formaldehyde (UF) foam releases substantial quantities of hydrogen cyanide gas when exposed to the elevated temperatures of a well developed fire. About 15-24% of the UF materials' weight was converted to hydrogen cyanide in the Bureau's studies. This presents a danger not only to fire fighters, but also to spectators who might be nearby and downwind of a major fire in which UF was involved.

NBS has recommended that the fire fighting community take several steps to help minimize these hazards and the more common toxicological problems associated with fires. The steps are:

--wearing breathing apparatus during the fire, through the clean-up period and until the building has been ventilated thoroughly;

--using a fog nozzle which sprays a fine mist in areas where electrical systems are concentrated (power to the building should be turned off first). Hydrogen chloride and hydrogen cyanide are very soluble in water, while phosgene gas is decomposed by water to hydrogen chloride and carbon monoxide; and

--checking carefully for burning or hot UF foam which may be releasing hydrogen cyanide gas. Special precautions should be taken to keep bystanders away from such fires.

FEDERAL PROTECTIVE MASKS UNRELIABLE (Washington Scene, Vol. 3, No. 43)

A warning is being issued to state and local governments on the use of outdated protective masks.

The warning about the masks - CDV-800, CDV-805, and XM-28E4 - comes from the U.S. Fire Administration (USFA). The masks, distributed 10 years ago by the Department of Defense, are no longer considered to be reliable.

The masks were designed for possible use in peacetime chemical/biological incidents and civil disturbance situations. However, the filter systems for these masks, according to USFA officials, cannot be depended upon. The CDV-800 mask is equipped with a replaceable M-11 military type canister filter. But, replacement filters are not available. The CDV-805 and XM-28E4 have built-in filters that do not accommodate replacement.

Some of these masks were purchased as much as 20 years ago and are well beyond their expected useful life. Because of the filter system problems, the masks are not suitable for use in an oxygen deficient environment.

DISPOSAL OF PICRIC ACID (General Information Bulletin 79-10, FBI Bomb Data Center)

FBI Bomb Data Center (BDC) General Information Bulletin (GIB) 79-5 presented the hazards of deteriorated picric acid $C_6H_2OH(NO_2)_3$ and described two proper methods of disposal for this substance. After this bulletin was disseminated, the FBI BDC was advised of a method by which a glass bottle of picric acid can be neutralized. It is presented in this publication as an aid to public safety personnel and as a supplement to GIB 79-5.

Handling of Picric Acid: Whenever picric acid is encountered, whether or not it is deteriorated or going to be destroyed, its explosive potential and toxicity must be remembered. It explodes rapidly when heated or struck, and should be kept away from direct contact with metals, especially lead and its compounds. Picric acid poisoning can occur from ingestion and absorption through the skin. It can cause irritation of the skin and mucus membranes as well as, in large doses, convulsions and death.

FBI BDC PARTICIPANTS ARE CAUTIONED THAT THIS DISPOSAL TECHNIQUE IS DESIRED AS INFORMATION ONLY. IT SHOULD ONLY BE ATTEMPTED BY TRAINED BOMB DISPOSAL PERSONNEL. THERE ARE NO COMPLETELY SAFE METHODS OF DESTROYING AN EXPLOSIVE MATERIAL. NEITHER THE FBI BDC NOR THE CONTRIBUTING AGENCY IS RESPONSIBLE FOR PROPERTY DAMAGE OR INJURIES ENSUING FROM THE IMPLEMENTATION OF THIS PROCEDURE.

Prior to the disposal, the area should be cleared of extraneous people, and those necessarily present should wear goggles, rubber gloves, and face shields. Under no conditions should individuals with kidney-liver disorders or blood disease handle picric acid. This procedure is intended for use with a standard glass bottle of picric acid, with a water content of not less than 10%.

For each bottle to be destroyed, a plastic bucket filled with enough water to cover the bottle should be provided. The bottle is inverted into this container, in order that the water can seep through the lid. The entire apparatus can be transported in this way to an open area suitable for completion of the disposal. While wearing gloves, a technician can unscrew the immersed lid permitting the acid and water to mix.

The resultant solution should then be poured onto a bed of shredded paper or excelsior, followed by a flammable solvent such as alcohol, benzene, gasoline, etc. The contaminated material should then be completely burned. Throughout this procedure, the safety precautions noted in GIB 79-5 are particularly pertinent.

The contributor of this method of disposal asserts that the picric acid must be destroyed by burning. If left in solution, evaporation of the solvent will leave behind picric acid crystals.

Comment: This procedure was contributed to the International Association of Bomb Technicians and Investigators (IABTI) by Mr. Ira Katz of Glendale, California. It was published in the IABTI official publication "The Detonator" in August 1979. Mr. Katz invites any member of IABTI or the law enforcement community to address questions or comments to him at 622 Colorado Street, Glendale, California 91204 or to call: (213) 247-6910 or (213) 249-8957.

NATIONAL FIRE ACADEMY

"Fully Involved," a non-periodic publication of the United States Fire Administration, indicates that at the completion of the first cycle of resident program instruction at the National Fire Academy, a profile of the academy students revealed that only 6.6% of the student body was from the volunteer fire service!

A good portion of the USFA commitment to the nation's fire service has been the specific inclusion of the volunteer fire service in all phases of education and training. As indicated in prior USFA bulletins, the Academy has designed a volunteer-oriented stream of scheduling through its Summer/Fall offerings to increase the percentage of volunteer participation.

Nine of the NFA's ten courses have at least one date especially designed for the volunteer firefighter. By starting on a Saturday, the schedule permits the volunteer fire fighter to attend specific one-week or two-week courses in the minimum amount of time, missing only three of five business days. In addition to the resident program instruction, the Academy offers weekend Outreach "Cluster" programs...and the NFA now has its own toll-free telephone number: 1 - 800 - 638 - 9600 or 9601.

* * * * *

The person who does not read has little advantage over one who can't.

LABEL FOR WOOD, COAL STOVES

The increasing use of coal and wood burning stoves has prompted the U.S. Consumer Product Safety Commission to begin developing a labeling rule to reduce injuries and deaths from fires caused by these appliances.

Rough national estimates based on a National Fire Protection Association (NFPA) survey of 15 states indicate that between 8,000 and 9,000 fires and 100 to 130 deaths are caused each year by wood and coal burning stoves. Chimney connectors for wood and coal stoves cause fires which account for another 15 to 20 deaths each year.

The major cause of these fires is reported to be improper installation of the appliance or connection of its chimney too close to a combustible surface.

CPSC is developing a proposed labeling rule which may require each manufacturer of wood or coal stoves or free-standing fireplaces:

- to specify minimum clearances to combustibles and the type of chimney required, and
- to maintain records supporting the appropriateness of labeling information.
- In addition, the staff was instructed to develop options as needed for other types of installation and maintenance information.

ANOTHER FD DISCRIMINATION SUIT SETTLED (Washington Scene, Vol. 3, No. 26)

The Department of Justice has obtained a consent decree requiring the Fort Lauderdale police and fire departments to hire and promote more black persons and women.

The discrimination suit filed against the city said there were only six blacks and 13 women among the city's 405 police officers, and four blacks and no women among the 275 fire fighters. The consent decree requires Fort Lauderdale to seek to attain a goal of employing blacks in 11.25% of the police and fire jobs and of hiring sufficient women to eliminate discrimination.

To meet this goal, the city is required to hire blacks for 30% of police and fire vacancies in each of the next five years. The city also is required to hire women for 30% of police vacancies and in proportion to the number of men and women who apply for fire fighter vacancies for the same time period.

The decree also enjoins the city from engaging in any discriminatory employment practice, provides for the promotion of blacks and women in proportion to their eligibility and forbids the city to use unvalidated hiring tests as an excuse for failure to meet hiring goals.

The decree also provides for adjusting the 11.25% hiring goal when the 1980 census results become final.

* * * * *

The only thing you should ever expect to get on a silver platter is tarnish.

SMOKE DETECTOR SUMMARY RELEASED BY IAFC

An executive summary has been released on the Phase I research project of the International Association of Fire Chiefs Foundation under a grant from the United States Fire Administration's National Fire Data Center. The report includes data collected through January, 1980, covering 1,168 incidents attended by fire departments in 12 jurisdictions throughout the United States. Included are 699 unwanted fires; 256 incidents of smoke from friendly fires; 213 incidents from other causes; and, 1,589 smoke detectors. Some of the findings are as follows:

1. The study indicates that smoke detectors are providing earlier warning to potentially life-threatening situations than occupants might otherwise receive. Investigators determined that an alarm from a smoke detector provided the first warning in more than 40% of the unwanted fire situations.
2. The study indicates that smoke detectors are having an impact in reducing the loss of life and serious injury from fire in residential property. Investigators in the communities studied estimated that smoke detectors prevented death or injury in 27% of the 699 unwanted fires studied to date. Of those incidents where all occupants were asleep, the percentage of "saves" increased dramatically. In these incidents, the rate of "saves" exceeded 90%.
3. Smoke detectors are having a measurable impact on reducing the fire loss to property. Investigators in the communities studied estimated that fire loss was reduced in approximately 35% of the unwanted fire incidents because of the earlier warning provided by the detector.
4. The initial intent of the study was to focus on unwanted fires; however, smoke from fires or heat sources even if confined to their intended place of origin, also might be a threat.
5. The vast majority of smoke detectors in the communities studied were, one, single station, ionization detector installed by the owner or occupant of the residence in the past three years.
6. Using nationally accepted criteria, investigators judged that 94% of all smoke detectors were installed correctly and 92% were located properly. Most detectors were installed by the owners using manufacturers' instructions.
7. Approximately 40% of the detectors in the study had been tested periodically. The failure to test the remaining 60% however did not cause failure to activate.
8. In the communities studied, investigators found that there was no apparent alarm from an installed smoke detector in 225 incidents or about 32% of the unwanted fires. Although some of these failures were because of installation or power problems, nearly 80% were attributed to lack of sufficient smoke at the detector location to cause alarm.

All of the above seems to substantiate the premise: IN ACTUAL SITUATIONS, SMOKE DETECTORS CAN AND ARE SAVING LIVES, PREVENTING INJURIES AND REDUCING FIRE LOSSES IN RESIDENTIAL PROPERTIES.

CELLULOSE INSULATION

For code authority to require thermal insulation to have a clearance from electrical fixtures, Section 11.404(a) and/or 11.404(b) of the Uniform Fire Code should

be used in conjunction with 410-66 of the National Electrical Code.

410-66 Clearance. Recessed portions of enclosures, other than at points of support, shall be spaced at least 1/2 inch from combustible material. Thermal insulation shall not be installed within 3 inches of the recessed fixture enclosure, wiring compartment or ballast and shall not be so installed above the fixture as to entrap heat and prevent the free circulation of air unless the fixture is otherwise approved for the purpose.

FIRE FIGHTERS' UNION LIABLE FOR DAMAGES TO PROPERTY DURING STRIKE (from the Management Report - Vol. 1, No. 3)

A private citizen may sue a fire fighters' labor union for damage sustained during a strike, according to a ruling by the Tennessee Court of Appeals.

During the summer of 1978, fire fighters engaged in an illegal strike in Memphis. The plaintiff, a resident of Memphis, alleged that when a shed on his property caught fire, only one fire engine arrived on the scene because of the lack of manpower. Moreover, the plaintiff asserted, the striking fire fighters that did appear merely observed the fire spread until all of the plaintiff's property was destroyed. He contended that if there had been no strike, most of his property would have been saved. The plaintiff requested compensatory and punitive damages as well as damages for the mental anguish caused by the destruction of his property.

The court ruled that a public nuisance theory was the only legal theory under which the plaintiff could proceed. It stated that the union, like any other individual or group, has the responsibility not to create a nuisance. A nuisance, the court noted, "extends to everything that endangers life or health, gives offense to the senses, violates the laws of decency, or obstructs the reasonable and comfortable use of property." The court declared that when a defendant organization creates the dangerous situation, it may be held liable for the nuisance and the damage it causes. Fullenwider v. Firefighters Local 1784, 1979-80 PBC 36,956 (Tenn. Ct. of App. June 2, 1980)

SAFETY GUIDELINES FOR OPERATING KEROSENE HEATERS

The State Fire Marshal Bureau would like to alert homeowners planning to use a kerosene room heater this winter to the importance of using proper fuel.

A new generation of these heaters has been developed which contains features that make them much safer than the old 'pot burners' that were common 30 years ago. However, they require proper measures by the user in the interests of fire safety, and that includes using the right fuel.

The Fire Marshal Bureau is providing the following safety check list:

- BURN ONLY KEROSENE. NEVER use gasoline, white gas, camp-stove or other fuels. They are extremely dangerous if used in kerosene heaters.
- Kerosene should be water-clear. Yellow or colored kerosene will smoke, smell and interfere with wick operation.

- Store kerosene supplies in an approved container, clearly marked KEROSENE, away from living quarters.
- Refill heater away from living quarters, when heater is cool, using a siphon pump to prevent spillage.
- Place the heater away from curtains, furniture, papers, clothes, or other combustible materials.
- Some heater surfaces become hot. Keep children away and instruct them not to touch the controls. Perhaps provide a barrier around the heater to prevent them contacting it.
- Provide adequate ventilation, normally furnished by opening a door to an adjacent room. In totally closed rooms, a window should be opened slightly. Avoid drafts.
- Read and follow the manufacturer's directions for correct operation and maintenance of the heater. Keep the instruction booklet available for reference.
- Clean and maintain your heater according to the manufacturer's instructions. Keep base tray free of dust, dirt or any obstructions.
- When turning the heater off, make sure the flame is completely extinguished.
- Because heaters have an open flame, do not use flammable solvents, aerosol sprays, lacquers, or gasoline in the same room.

WHAT A BARGAIN!! (from the Pennsylvania Fire Crier, Vol. III, No. 1)

Have we got a bargain for you! It's the ultimate investment - and it will never, ever lose its value. It's the perfect product, and you don't even have to buy it.... just use it.

It won't furnish instant glamour, but it could keep you looking as you do today.

It won't deliver a thrill a minute, but it could prevent a life of forced inactivity.

It won't create a Shangri-la, but it could preserve your current neighborhood.

It won't open palace doors, but it could keep your own roof over your head.

It won't surround you with luxury, but it could protect your family treasures.

It won't assure a life of ease, but its disregard could inflict a world of pain.

It won't guarantee a living, but its omission could cost you your job.

It won't promote prosperity, but its deficiency could result in devastation.

It won't provide companionship, but its neglect could deprive you of your loved ones.

It won't offer eternal life, but its disrespect could take your life tomorrow - or even tonight.

*Smoking may be dangerous to your health;
Credit cards may be hazardous to your wealth;
But our product affects your total happiness.*

The ultimate investment; the perfect product; the best bargain -- IT'S FIRE SAFETY.

ARTICLES OF INTEREST

Due to copyright rules and regulations, we are unable to reproduce the following articles, but we do feel that they will be of interest to fire personnel in Montana.

"Fire Within A Residential Solar Panel" by Clifford S. Harvey, FIRE CHIEF, September, 1980 -- "With more and more people turning to sun power as an alternative energy source, fire officials should be aware of a possible fire hazard associated with some collection panels." (page 31-33)

"Fire Problem in Mobile Homes SEVERE" by Marguerite Gee, THE INTERNATIONAL FIRE CHIEF, October 1980, Vol. 46, No. 10 -- This article is in relation to the study that the State Fire Marshal Bureau participated in between January 1, 1979 and March 31, 1979. It is a brief overview of the results of the study and identifies "several modifications to the standard that could produce additional reductions in the size and severity of the mobile home fire problem."

MONTANA FIRE CODES

The State Fire Marshal Bureau has received several requests for copies of our Montana Fire Codes. Unfortunately, our supply has been depleted, and we will not have any more printed until after the close of this upcoming Legislative Session.

If you have not received a copy of the Codes published October 1979, or if you require additional copies, please contact us in writing at your earliest convenience, and we will add your name or department to our list. Write: State Fire Marshal Bureau, 1409 Helena Avenue, Helena, Montana 59620.

ANNOUNCEMENTS

The Bureau is in the process of updating our mailing list -- STILL. Our past requests for assistance have fallen by the wayside, so we're going to give it one more try. A good portion of the names/addresses/phone numbers/etc., on our present list are obsolete and it causes problems and a bit of embarrassment when we have to contact you for one reason or another.

SO will you please fill in the following and either send the information to us OR telephone it in (our number is 449-2050).

Department Name: _____	County: _____
Fire Chief: _____	Address: _____
Work Phone: _____	_____
Home Phone: _____	(Mailing Address)

The mailing list will be finalized by the end of January 1981, so please send us the correct information as soon as possible. This will also ensure that the proper individuals receive materials sent from our office. THANK YOU!!!!

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NFPA Prosecutor's Seminar: The National Fire Academy and the National Academy of District Attorneys have scheduled a series of seminars to be conducted throughout the country, specifically designed for the Prosecutor.

Topics offered are: General Motive and Behavior of Fire; Incendiary Fire Detection; Inter-Agency Investigatory Cooperation; Insurance Industry Assistance; Preparation and Presentation of the State's Case; How to Meet Common Arson Defenses.

For further information, contact: Kathryn Gentilezza, National College of District Attorneys, College of Law, University of Houston, Houston, Texas 77004.

* * * * *

I.A.A.I. and Fire Prevention Association Meeting -- As a result of this combined meeting held in Butte in September, a Uniform Fire Code Review Committee is being formed to accept and review suggestions and recommended changes to the Uniform Fire Code. This committee will be appointed by Lee Lewis, Association President, and Les Johnson of Missoula will be the Chairman.

After the committee has reviewed the changes, it will pass its decisions and recommendations on to Mr. Kelly, who is also a member of the Western Fire Chiefs Association and serves on the Code Change Committee for that Association. The committee will meet in the spring, which will allow Mr. Kelly time to prepare for the Western Fire Chiefs Committee meeting later in the year.

Members of the Associations also discussed the possibility of initiating a certificate or award letter type program for the State. This program would recognize individuals throughout Montana for a particular "fire safety or protection/prevention" deed. It has been suggested that a screening committee be appointed by the State Fire Marshal, and this committee would select unique situations for an award to be presented during National Fire Prevention Week. In the past, meritorious deeds involving "fire" have been handled on a community basis only. More information on this matter will be forthcoming.

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The West Helena Valley Volunteer Fire Department will be host for the Montana Fireman's Convention in June, 1981.

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The Fire Marshal's Advisory Council and Lobby Committee members of various associations are scheduled to meet with the Fire Marshal Bureau staff on December 18, 1980, to review proposed legislation.

NEW APPOINTMENTS

Libby Volunteer Fire Department, Out-of-District, Rural, and the St. Regis Paper Company has a new fire chief. JIM DAVIDSON replaced CHAUNCEY SAUER.

Hamilton Volunteer Fire Department - LLOYD GREENUP has replaced SCOTT COVERT as fire chief.

Hardin Volunteer Fire Department - RON JOHNSON has replaced RONALD A. KOEBBE as fire chief. BOB KEHLER has been appointed fire marshal, and TERRY BULLIS is first assistant.

Malmstrom Air Force Base Fire Department - JACK MITCHELL is the new fire chief, replacing J.H. GARRETT.

Livingston Fire Department - WARREN CASE has been appointed fire marshal.

Big Sandy Volunteer Fire Department - RAYMOND COURTAGUE has been appointed fire chief, after fire chief LARRY MARTIN met with a fatal repair shop accident. TERRY TYLER has been appointed fire inspector.

Missoula Fire Department - JACK REED has retired, and AL SAMPSON has been appointed fire chief.

Missoula Rural Fire Department - BRUCE SUENRUM has replaced LOREN STANFIELD as fire chief.

Fairfield Volunteer Fire Department - BUD SCHROCK has retired after 20 years as a volunteer, and RICHARD HOWARD has been appointed as the new fire chief.

Culbertson Volunteer Fire Department - WAYNE FRYHLING has been appointed fire chief, replacing JOE GANRUD.

Jordan Volunteer Fire Department - JOHN GIBSON has replaced ROBERT JOHNSON as fire chief.

East Helena Valley Volunteer Fire Department - BILL WEGNER has replaced BILL SUMMERS as fire chief.

Ashland Volunteer Fire Department - CARL LENGARD has been appointed fire chief, replacing ALBERT SNODGRASS.

West Yellowstone Volunteer Fire Department - GUS TUREMAN has replaced LARRY E. KUNTER as fire chief.

CODE INTERPRETATIONS

The following is offered by Chief R.V. Christoffersen, Fire Code Coordinator for the Western Fire Chiefs Association. He can be contacted at: ICBO, 5360 South Workman Mill Road, Whittier, CA 90601.

QUESTION: Our department is seeking an interpretation of a section from the Uniform Fire Code which is also taken from the Uniform Building Code. Presently, we are utilizing the 1979 editions of the Uniform Fire Code, Uniform Building Code and National Electrical Code.

In reference to Section 12.113(a) through (c) of the Uniform Fire Code, Exit Illumination, is this description of exit lighting to be construed to also mean emergency lighting? In other words, because separate circuits are used, does this constitute emergency lighting for exit illumination?

Our State Uniform Fire Code (1979 Uniform Fire Code) is inapplicable at times, and for direction, we use the NFPA 101, Life Safety Code, as a nationally recognized and accepted standard. It speaks to emergency lighting and is considerably different than Section 12.113 of the Uniform Fire Code. My desire for the interpretation is because other professionals state that the Uniform Fire Code exit illumination is a form of emergency lighting; and, therefore, we cannot go to the Life Safety Code because the Uniform Fire Code addresses the question of emergency lighting.

ANSWER: Your question as I understand it is this, "Does Section 12.113(a) through (c) speak to emergency lighting?" The answer is "yes" and "no" with the following explanation.

Section 12.113 (c) 1 provides for emergency lighting as it states, "Two separate sources of supply . . ." Therefore, the occupancies listed under this section are provided with emergency lighting. A code interpretation to this effect was published by ICBO in 1969.

Section 12.113(c) 2 provides for separate circuits, but these can come from a single source or supply and so the occupancies listed under this subsection would not be provided with emergency lighting. In the second paragraph, your question reads, "Because separate circuits are used, does this constitute emergency lighting for exit illumination?" If the separate circuits have a single source of power or supply, this would not constitute emergency lighting.

QUESTION: There has been some question as to whether NFPA 101 (Life Safety Code) is adopted when the Uniform Fire Code is adopted. It has been our position that being NFPA 101 is not listed in Section 2.303 under "NFPA Standards" that it is not an adopted standard to be enforced to the "letter of the law."

In Appendix D, NFPA National Fire Codes, Volumes 1 through 16, are listed as "standards and publications representing nationally recognized good practice." Our position on this is that the standards and publications listed in Appendix D are advisory, and compliance with the standard would be evidence of compliance with the intent of the Uniform Fire Code, not a mandatory standard.

Occasionally, we have used the Life Safety Code as a guideline for conditions that are not specifically covered in the Uniform Building Code or Uniform Fire Code. It has not been used as strictly enforced code or standard. We would very much appreciate your clarifying the intent of the International Conference of Building Officials and the Western Fire Chiefs Association in this matter.

ANSWER: Your interpretation on the use of the fire code relating to Section 2.303 and Appendix D is correct. It is used in this manner by most fire departments and is the recommended manner of use by the Western Fire Chiefs Association.

In the fourth paragraph of your letter you stated ". . . standards and publications listed in Appendix D are advisory, and compliance with the standard would be evidence of compliance with the intent of the Uniform Fire Code, not a mandatory standard." This is correct but one word of caution. Appendix D would have to be listed in your adoption ordinance to make it a part of the code and legally usable. If this is what you have done, then your use of the Life Safety Code as a guideline is entirely correct. An appendix which is not listed in the adoption ordinance is not legally a part of the code.

QUESTION: Our community has adopted the Uniform Building Code. We have also adopted the Uniform Fire Code. I find that the codes are not compatible, at least they are not compatible as far as the interpretation of the Fire Code by our fire chief is concerned.

Section 504 and Table No. 5-A of the Uniform Building Code governs the location of a building on a parcel of land. Depending on the type of construction, a building may be constructed on a side lot line; Section 10.207 of the Uniform Fire Code under paragraph (c) states, "The access roadway shall be extended to within 150 feet of all portions of the exterior walls of the first story of any building."

The fire chief interprets this section as saying that he must be able to part a fire truck within 150 feet of any part of the exterior of the building and the maximum straight pull of fire hose from the truck to any part of the building shall not exceed 150 feet. If a building is constructed on the side lot line preventing the fire department access to the rear of the building, the chief will not approve the site plan.

ANSWER: Your question is, "Is there a conflict?" Not in the true sense of the word. The Fire Code does not prohibit or restrict you from complying with Section 504 or Table No. 5-A. What the Fire Code does is to require an access roadway within 150 feet of all portions of the exterior walls of the first story of any building or provide an approved fire protection system.

If in complying with Table No. 5-A it is impractical to provide for the access roadway required by the Fire Code, the building would have to be equipped with an approved fire protection system. This then is an additional requirement but not a conflicting requirement.

The rationale behind Section 10.207 is to give some consideration to the fire suppression problem especially as it relates to getting to the seat of the fire. The fire department must be able to attack a fire from more than one direction (excluding the roof) to confine it and protect the exposures whether inside or outside of the building. This cannot be done if the building is built to the side lot lines preventing access to the rear except over the roof or through the building. The chief would be correct in not approving such a plan unless the building was equipped with an approved fire protection system.

However, it appears as if the chief is reading something additional into the Fire Code if he states, ". . . and the maximum straight pull of fire hose from the truck to any part of the building shall not exceed 150 feet." The Fire Code only requires the roadway to be within 150 feet of all portions of the exterior walls of the first story. For example, if you had a building 500 feet square with an access roadway entirely around the building, you would be complying with Section 10.207(c), but a straight pull of hose 150 feet in length would not reach the center core of the building. It is only "all portions of the exterior walls" not the entire building.

NEWSLETTER READER SURVEY

As part of the continuing effort to promote efficiency and economy in State government, all State agencies have been encouraged to verify agency mailings. In compliance with Management Memo 1-80-2, we are requesting you to complete the following survey and return it to us (along with your correct mailing list information, page 18) as soon as possible.

- | | |
|--|---|
| 1. How do you find the articles?
___ Too Technical ___ About Right
___ Too General ___ | 4. Do you wish to receive future issues
of the newsletter? ___ Yes ___ No |
| 2. Should the newsletter be published more
than 4 times a year? ___ Yes ___ No | 5. Do you know someone who would be inter-
ested in receiving the newsletter?
Please provide that person's name and
address: _____ |
| 3. Are there any special subjects you would
like to see presented? Explain: _____ | |

COMMENTS:

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HELENA, MONTANA 59620

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